

Governor Jane Dee Hull

State of Arizona

Russell Rhoades, Director

Arizona Department of Environmental Quality



3033 N. Central Avenue

Phoenix, AZ 85012

(602) 207-2338 Voice

(602) 207-2366 Fax

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CLASS I PERMIT**

COMPANY NAME: Arizona Electric Power Cooperative, Inc.
FACILITY NAME: Apache Generating Station
PERMIT NUMBER: 1000109
ORIS CODE: 160
DATE ISSUED: Proposed Permit
EXPIRY DATE:

SUMMARY

This operating permit is issued to Arizona Electric Power Cooperative, Inc. (AEPCO), the Permittee, for operation of their Apache Generating Station, located approximately 3 miles southeast of the town of Cochise in the Willcox Basin in Cochise County, Arizona. The plant currently supplies electric power to six rural electric distribution systems serving portions of Arizona, California, and New Mexico. It also sells wholesale power to individual municipal, commercial, and industrial customers in Arizona.

The plant supplies power through six electric generation units: two coal/natural gas-fired steam electric units, a gas/fuel oil-fired steam electric unit, and three gas/oil-fired gas turbines. The rated generating capacity of the entire plant is approximately 560 MW. Each of the coal fired steam electric unit has an electrostatic precipitator and a flue gas desulfurization system for controlling particulate matter emission and sulfur dioxide emissions. There is no air pollution control equipment installed on any of the turbine engines and the gas/fuel oil-fired steam generator at the Apache Generating Station.

All definitions, terms, and conditions used in this permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All material permit conditions have been identified within the permit by a double underline. All terms and conditions in this permit are enforceable by the Administrator of the U.S. Environmental Protection Agency, except for those terms and conditions that have been designated as "State Requirements".

AEPCO is a "major source". The potential emission rates of the following pollutants are greater than 100 tons per year: (i) particulate matter, (ii) sulfur dioxide, (iii) nitrogen oxides, (iv) carbon monoxide, and (v) volatile organic compounds. AEPCO is subject to the Acid Rain Program of the Clean Air Act. This permit is issued in

Proposed Permit

accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes.
Applicable requirements for the operations at the Apache Station are listed in Attachment "C" of this permit.

TABLE OF CONTENTS

ATTACHMENT "A": GENERAL PROVISIONS	12
I. PERMIT EXPIRATION AND RENEWAL	12
II. COMPLIANCE WITH PERMIT CONDITIONS	12
III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OF TERMINATION FOR CAUSE	12
IV. POSTING OF PERMIT	13
V. FEE PAYMENT	13
VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE	13
VII. COMPLIANCE CERTIFICATION	13
VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS	14
IX. INSPECTION AND ENTRY	14
X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD	15
XI. ACCIDENTAL RELEASE PROGRAM	15
XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES	15
XIII. RECORD KEEPING REQUIREMENTS	17
XIV. REPORTING REQUIREMENTS	18
XV. DUTY TO PROVIDE INFORMATION	18
XVI. PERMIT AMENDMENT OR REVISION	18
XVII. FACILITY CHANGE WITHOUT PERMIT REVISION	18
XVIII. TESTING REQUIREMENTS	19
XIX. PROPERTY RIGHTS	20
XX. SEVERABILITY CLAUSE	21
XXI. PERMIT SHIELD	21
XXII. ACID RAIN	21
ATTACHMENT "B": SPECIFIC CONDITIONS	22
I. EMISSION LIMITS/STANDARDS	22
II. AIR POLLUTION CONTROL EQUIPMENT	34
III. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	35
IV. TESTING REQUIREMENTS	45
V. USED OIL FUEL	46
ATTACHMENT "C": APPLICABLE REQUIREMENTS	48
ATTACHMENT "D": EQUIPMENT LIST	52
ATTACHMENT "E": INSIGNIFICANT ACTIVITIES	56
ATTACHMENT "F": PHASE II ACID RAIN PROVISIONS	60

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
POINT SOURCE P1. Steam Units 2 and 3 Primary Fuel - Coal A.A.C. R18-2-903, 40 CFR 60, Subpart D	PM	ESP	0.10 lb/MMBtu	Evaluate opacity from the COMS on a 24-hr rolling average excluding periods of startup, shutdown, and malfunction. If this opacity reading exceeds 15% initiate investigation for corrective action within 24 hours to improve control equipment performance. See Section III.D.2 of Attachment "B".	Maintain records of corrective actions taken.	Annual performance test using EPA Reference Method 5, 5B, or 17.
	SO ₂	SDAS	0.80 lb/MMBtu	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	Annual performance test using EPA Reference Method 6 or 6C.
	NO _x	No controls installed	0.70 lb/MMBtu	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	Annual performance test using EPA Reference Method 7 or 7E.
	Visible Emissions	No controls installed	Opacity ≤ 20% except for one-six minute period per hour of not > 27%	COMS Type, date, and time of fuel change.	Part 60 and/or Part 75 requirements. Type, date, and time of fuel change.	Annual performance test using EPA Reference Method 9.
P1. Steam Units 2 and 3 Alternate Fuel - Natural Gas A.A.C. R18-2-903, 40 CFR 60, Subpart D	PM	ESP	0.10 lb/MMBtu	Evaluate opacity from the COMS on a 24-hr rolling average excluding periods of startup, shutdown, and malfunction. If this opacity reading exceeds 15% initiate investigation for corrective action within 24 hours to improve control equipment performance. See Section III.D.2 of Attachment "B".	Maintain records of corrective actions taken.	--
	SO ₂	SDAS	**	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	--
	NO _x	No controls installed	0.20 lb/MMBtu	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	--
	Visible Emissions	No controls installed	Opacity ≤ 20% except for one-six minute period per hour of not > 27%	COMS Type, date, and time of fuel change.	Part 60 and/or Part 75 requirements. Type, date, and time of fuel change.	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
P1. Steam Units 2 and 3 Alternate Fuel - Combination of Fuel A.A.C. R18-2-903, 40 CFR 60, Subpart D	PM	ESP	0.10 lb/MMBtu	Evaluate opacity from the COMS on a 24-hr rolling average excluding periods of startup, shutdown, and malfunction. If this opacity reading exceeds 15% corrective actions shall be taken within 24 hours to improve control equipment performance and reduce opacity to at least 15%. See Section III.D.2 of Attachment "B".	Maintain records of corrective actions taken.	--
	SO ₂	SDAS	0.8 lb/MMBtu	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	--
	NO _x	No controls installed	$w(260)+x(86)+y(130)+z(300)/[w+x+y+z]$. See Section I.A.4 of Attachment B for the definition of the variables	CEMS. See Section III.D.1 of Attachment "B".	Part 60 and/or Part 75 requirements	--
	Visible Emissions	No controls installed	Opacity \leq 20% except for one-six minute period per hour of not $>$ 27%	COMS Type, date, and time of fuel change.	Part 60 and/or Part 75 requirements. Type, date, and time of fuel change.	--
P2. Steam Unit 1/Combined Cycle Operation of Steam Unit 1 and Gas Turbine No. 1 Primary Fuel - Natural Gas [A.A.C. R18-2-702 and 703]	PM	No controls installed	$E = 1.02 Q^{0.769}$ lb/hr	--	--	--
	SO ₂	No controls installed	**	--	--	--
	NO _x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity \leq 40%	Type, date, and time of fuel change.	Type, date, and time of fuel change.	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
P2. Steam Unit 1/Combined Cycle Operation of Steam Unit 1 and Gas Turbine No. 1 Alternate Fuel - Fuel oil No.4, Fuel Oil No. 5, or Fuel Oil No. 6 [A.A.C. R18-2-702 and 703]	PM	No controls installed	$E = 1.02 Q^{0.769}$ lb/hr	Keep on record the contractual agreement with the liquid fuel vendor indicating: heating value, ash content, and fuel firing rate.	--	--
	SO ₂	No controls installed	1.0 lb/MMBtu (max 3-hr average) heat input	Keep on record name of oil supplier, sulfur content of oil from which the shipment came, method used to determine sulfur content, density, heating value, and emission calculations performed pursuant to equation in III.E.2.b of Attachment "B".	--	--
	NO _x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity ≤ 40%	Type, date, and time of fuel change. Opacity test result. Number of hours fuel oil is burned.	Type, date, and time of fuel change. Opacity test result. Number of hours fuel oil is burned.	If fuel oil is combusted continuously for greater than 48 hrs but less than 168 hrs. then test one time for opacity. If fuel oil is combusted continuously for greater than 168 hrs then test once during each 168 hr period for opacity. EPA Reference Method 9.
Steam Units 1, 2, or 3 Alternate Fuel - Used oil fuel A.R.S. 49-426.G	Arsenic (As) Cadmium (Cd) Chromium (Cr) Lead (Pb) and PCBs	No controls installed	As ≤ 5 ppm Cd ≤ 2 ppm Cr ≤ 10 ppm Pb ≤ 100 ppm PCBs ≤ 2 ppm Maximum of 5% of total fuel in any tank ≤40 hrs/year	Record the following: Dates on which used oil fuel was burned. Hours of usage of the used oil fuel. Quantity of fuel oil burned.	Report results of the tests.	Test each source of used oil fuel for As, Cd, Cr, Pb, and PCBs using approved EPA methods

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
P3. Turbines #1, #2, and #3 and Turbine #1 Startup Diesel Engine Primary Fuel - Natural Gas [A.A.C. R18-2-702 and 719]	PM	No controls installed	$E = 1.02 Q^{0.769}$ lb/hr	Keep copy of FERC-approved Tariff agreement which contains the lower heating value of the fuel being fired.	--	--
	SO ₂	No controls installed	**	Keep copy of FERC-approved Tariff agreement which contains the sulfur content of the fuel being fired.	Report any daily period during which sulfur content of the fuel exceeds 0.8%.	--
	NOx, VOC, and CO	No controls installed	**	Dates and hours of operation of each turbine.	Dates and hours of operation of each turbine.	Test in accordance with Section V.C of Attachment "B".
	Visible Emissions	No controls installed	Opacity \leq 40% for any period > 10 consecutive seconds except for first ten minutes after cold starting.	Type, date, and time of fuel change.	Type, date, and time of fuel change.	--
P3. Turbines #1, #2, and #3 and Turbine #1 Startup Diesel Engine Alternate Fuel - Fuel oil #2 for Turbines #1 and #2, and Turbine #1 Startup Diesel Engine. Alternate Fuel - Fuel oil #2 through #6 for Turbine #3 [A.A.C. R18-2-702 and 719]	PM	No controls installed	$E = 1.02 Q^{0.769}$ lb/hr	Keep on record the contractual agreement with the liquid fuel vendor indicating: heating value, ash content, and fuel firing rate.	--	--
	SO ₂	No controls installed	Sulfur content < 0.9 percent by weight 1.0 lb/MMBtu heat input	Keep on record name of oil supplier, sulfur content of oil from which the shipment came, method used to determine sulfur content, density, heating value, and emission calculations performed using equation given in III.F.3.b of Attachment "B".	Report any daily period during which sulfur content of the fuel exceeds 0.8%.	--
	NOx, VOC, and CO	No controls installed	**	Dates and hours of operation of each turbine.	Dates and hours of operation of each turbine	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
	Visible Emissions	No controls installed	Opacity \leq 40% for any period > 10 consecutive seconds except for first ten minutes after cold starting.	Type, date, and time of fuel change. Opacity test result. Number of hours fuel oil is burned.	Type, date, and time of fuel change. Opacity test result. Number of hours fuel oil is burned.	If fuel oil combusted continuously for greater than 48 hrs but less than 168 hrs. then test one time for opacity. If fuel oil combusted continuously for greater than 168 hrs then test once during each 168 hr period for opacity. EPA Reference Method 9.
P4. Coal Preparation Plant Crusher, Screening Units, Railcar Unloading Feeder Nos. 1 through 8, Screen Feeders, Crusher, Screening Units, Conveyor Nos. 1, 2, 6, 7, 8, and 9, Transfer Chute from Conveyor No. 1 to Conveyor No. 6, and Transfer Hopper Downstream of Crusher 40 CFR 60.250, Subpart Y	Visible Emissions	Spray bars on transfer points	Opacity \leq 20%	Weekly visual observation of the coal preparation plant when it is in operation. This shall include observation of all listed points. See section III.H.1 of Attachment B for further detail.	Report measures taken under Section III.H.1 of Attachment B.	EPA Reference Method 9 when opacity \geq 20% on an instantaneous basis.
P4. Coal Preparation Plant Conveyor Nos. 3, 4a, 4b, 5-2, and 5-3, Feeder Nos. 9 through 13, Transfer Chute from Conveyor No. 1 to Conveyor No. 2, Enclosed Transfer Chute Nos. 4A and 4B, Coal Silos, Transfer Chute from Conveyor No. 1 to Conveyor Nos. 4a and 4b A.A. C. R18-2-730	Visible Emissions	Spray bars on transfer points. Baghouse on silos	Opacity \leq 40%	Weekly visual observation of the coal preparation plant when it is in operation. This shall include observation of all listed points. See section III.H.2 of Attachment B for further detail.	Report measures taken under Section III.H.2 of Attachment B.	EPA Reference Method 9 when opacity \geq 40% on an instantaneous basis.
	PM	Spray bars on transfer points. Baghouse on silos	$E=55.0P^{0.11} - 40$	Maintain and operate air pollution control devices in accordance with the manufacturer's specification. Record emissions related maintenance performed on the air pollution control devices.	--	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
P5. Limestone Handling System Storage Bin, Ball Mills, and transfer points A.A. C. R18-2-604, 605, 606, 607, 610, 702.B, and 730	Visible Emissions	Spray bars on transfer points. Bag filter on storage bin	Opacity \leq 40%	Weekly visual observation of the limestone handling system when it is in operation. This shall include observation of all enclosed transfer points, open transfer points, and the bag filter. See section III.I of Attachment B for further detail.	Report measures taken under Section III.I of Attachment B.	EPA Reference Method 9 when opacity \geq 40% on an instantaneous basis.
	PM	Spray bars on transfer points. Bag filter on storage bin	$E=4.10P^{0.67}$	Maintain and operate air pollution control devices in accordance with the manufacturer's specification. Record emissions related maintenance performed on the air pollution control devices.	--	--
P6. Cooling Towers 1, 2, and 3 A.A.C. R18-2-702.B and 730	Visible Emissions	No control installed	Opacity \leq 40%	--	--	--
	PM	No control installed	$E = 55.0P^{0.11} - 40$	--	--	--
Hot Water Heater Primary Fuel - Propane Space Heaters Primary Fuel - Natural Gas [A.A.C. R18-2-724]	PM	No controls installed	$E = 1.02 Q^{0.769}$ lb/hr	--	--	--
	SO ₂	No controls installed	**	--	--	--
	NO _x	No controls installed	**	--	--	--
	Visible Emissions	No controls installed	Opacity \leq 15%	Type, date, and time of fuel change.	Type, date, and time of fuel change. Report all six-minute periods in which opacity exceeds 15 percent.	--
FUGITIVE SOURCES F1. Non-point Sources a. Driveways, Parking lots, and vacant lots [A.A.C. R18-2-604.B]	Visible Emissions	Dust suppressant, adhesive soil stabilizer, paving, or barring access	Opacity \leq 40%	Type of control used.	--	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
b. Open area construction, reparation, etc. and earth excavation [A.A.C. R18-2-604.A]	Visible Emissions	Dust suppressant, adhesive soil stabilizer, paving, covering, landscaping, detouring, barring access or wetting agent	Opacity \leq 40%	Date and type of activity. Type of control used.	--	--
c. Roadway construction, repair or reconstruction [A.A.C. R18-2-605.A]	Visible Emissions	Dust suppressant, temporary paving, detouring, or wetting agent	Opacity \leq 40%	Date and type of activity. Type of control used.	--	--
d. Material transportation [A.A.C. R18-2-605.B]	Visible Emissions	Covering, dust suppressant or wetting agent	Opacity \leq 40%	Date and type of activity. Type of control used.	--	--
e. Material Handling [A.A.C. R18-2-606]	Visible Emissions	Covering, dust suppressant, spray bars, hood, or wetting agents	Opacity \leq 40%	Date and type of activity. Type of control used	--	--
f. Storage Piles [A.A.C. R18-2-607.A]	Visible Emissions	Covering, dust suppressant, chemical stabilization, or wetting agents	Opacity \leq 40%	Date and type of activity. Type of control used.	--	--
g. Stacking and reclaiming machinery at storage piles [A.A.C. R18-2-607.B]	Visible Emissions	Minimize fall, dust suppressant, spray bars or wetting agents	Opacity \leq 40%	Date and type of activity. Type of control used.	--	--
h. Cleaning of site and roadway [A.A.C. R18-2-804.B]	Visible Emissions	Wetting agent or dust suppressant	**	Date and duration of project and control measure used	--	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
F2 Abrasive Blasting [A.A.C R18-2-726 and 702.B]	Visible Emissions	Wet blasting; enclosure with dust collection device.	Opacity \leq 40 %	Date, type of project and control measures used	--	--
F3 Spray Painting [A.A.C. R18-2-727, 702.B and SIP R9-3-527.C]	VOC	Enclosures containing at least 96% of overspray except for architectural coating and spray painting,	**	--	--	--
	Visible Emissions	Not required.	Opacity \leq 40%	--	--	--
F4. Solvent Cleaners /Degreasers and Gasoline and Fuel Oil Transfer and Dispensing [A.A.C. R18-2-730.F]	VOCs	Install means to reduce air pollution from evaporation, leakage, or discharge of solvents being processed, stored, used, or transported.	--	--	--	--
F5 Mobile Sources						
a. Off-road machinery [A.A.C. R18-2-802]	Visible Emissions	Not required	Opacity \leq 40% for any period greater than 10 consecutive seconds	Record of all emissions related maintenance on off-road machinery stationed at the facility	--	--
b. Roadway and site cleaning machinery [A.A.C. R18-2-804.A]	Visible Emissions	Not required	Opacity \leq 40% for any period greater than 10 consecutive seconds	Record of all emissions related maintenance on roadway and site cleaning machinery stationed at the facility	--	--

Proposed Permit

Table 1: Summary of Permit Requirements

This table summarizes certain requirements that are applicable to Apache Station operations. It is intended for reference use only. The enforceable terms and conditions of this permit are contained in Attachments A through F of this permit.

Emission Unit	Pollutants Emitted	Control Measure	Emission Limits / Standards	Monitoring /Recordkeeping	Reporting ¹	Testing Frequency/ Methods
F6 Demolition/Renovation [A.A.C. R18-2-1101.A.8]	Asbestos	As required by rule	As required by rule	Required paperwork on file	--	--
F7 Nonvehicle Air Conditioner Maintenance and/or Services [40 CFR 82, Subpart F]	Ozone depleting substances	As required by rule	As required by rule	Required paperwork on file	--	--

Note: ** No limits established

-- Not required

⁽¹⁾ Semiannual compliance certification required for all emission units

Proposed Permit

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

I. PERMIT EXPIRATION AND RENEWAL [A.R.S. § 49-426.F, A.A.C. R18-2-304.C.2, and 306.A.1]

- A. This permit is valid for a period of five years from the date of issuance of the permit.
- B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS [A.A.C. R18-2-306.A.8, A.R.S. § 49-463, and A.R.S. §49-464]

- A. The Permittee shall comply with all the conditions contained in Attachments "A" through "F" of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act (Act).
- B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE [A.A.C. R18-2-306.A.8.c and 321]

- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances:
 - 1. Additional applicable requirements under the Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.

Proposed Permit

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.
 3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A. Permittee shall post this permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:
1. Current permit number.
 2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on the site.

V. FEE PAYMENT

[A.A.C. R18-2-326 and 306.A.9.]

Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327]

- A. Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

- A. Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification

Proposed Permit

shall be submitted no later than April 15th, and shall report the compliance status of the source during the period between September 16th of the previous year, and March 15th of the current year. The second certification shall be submitted no later than October 15th, and shall report the compliance status of the source during the period between March 16th and September 15th of the current year. [A.A.C. R18-2-309.2.a]

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification; [A.A.C. R18-2-309.2.c.i]
 2. Compliance status of each applicable requirement; [A.A.C. R18-2-309.2.c.ii]
 3. Whether compliance was based on continuous or intermittent data; [A.A.C. R18-2-309.2.c.iii]
 4. Method(s) used for determining the compliance status of the source, currently and over the reporting period; [A.A.C. R18-2-309.2.c.iv]
 5. All instances of deviations from permit requirements reported pursuant to Section XII.B of this Attachment; and [A.A.C. R18-2-306.A.5.a]
 6. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d. [A.A.C. R18-2-309.5.d]
- B. A copy of all compliance certification for Class I permits shall also be submitted to the EPA Administrator. [A.A.C. R18-2-309.2.d]

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [A.A.C. R18-2-309.3]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY [A.A.C. R18-2-309.4]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

- A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

Proposed Permit

- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. [A.A.C. R18-2-304.C]

XI. ACCIDENTAL RELEASE PROGRAM

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the timeline specified in 40 CFR Part 68. [40 CFR 68]

XII. REPORTING OF EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCIES

A. EXCESS EMISSIONS REPORTING [A.A.C R18-2-310.C]

- 1. Excess emissions shall be reported as follows:
 - a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
 - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from paragraph b. of this subsection.
 - (2) Detailed written notification within 72 hours of the notification pursuant to subparagraph (1) of this paragraph.
 - b. Report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred.
 - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions.
 - (3) Date, time and duration or expected duration of the excess emissions.
 - (4) Identity of the equipment from which the excess emissions emanated.
 - (5) Nature and cause of such emissions.

Proposed Permit

- (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.
- (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction of Steam Unit 2 or 3, the report shall contain a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to subsection A.1.a.(2) of this Section.

[A.A.C. R18-2-310.D]

3. It shall be the burden of the Permittee to demonstrate, through submission of the data and information required by Section XII.A of Attachment "A", that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of excess emissions.

[A.A.C. R18-2-310.B]

B. PERMIT DEVIATIONS REPORTING

[A.A.C. R18-2-306.A.5]

1. A deviation means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit that can be used to determine compliance, that identifies that an emission unit subject to a permit term or condition has failed to meet an applicable emission limitation or standard or that a work practice was not complied with or completed. For a condition lasting more than 24 hours which constitutes a deviation, each 24 hour period is considered a separate deviation. Included in the meaning of deviation are any of the following:
 - a. A condition where emissions exceeded an emission limitation or standard;
 - b. A condition where process or control device parameter values demonstrate that an emission limitation or standard has not been met;
 - c. Any other condition in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.
2. Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time the deviation occurred.

C. EMERGENCY PROVISION

[A.A.C. R18-2-306.E]

Proposed Permit

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
 - a. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of paragraph (c) of this subsection are met.
 - b. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) The permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
 - c. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - d. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
- D. For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

- A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:
 1. The date, place as defined in the permit, and time of sampling or measurements;

Proposed Permit

2. The date(s) analyses were performed;
 3. The name of the company or entity that performed the analyses;
 4. A description of the analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5.a]

Permittee shall submit the following reports :

- A. Compliance certifications in accordance with Section VII of Attachment “A”.
- B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment “A”.
- C. Other reports required by Section III of Attachment “B”.

XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304.G and 306.A.8.e]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-318, 319 and 320]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319);
- C. Significant Permit Revision (A.A.C. R18-2-320).

Proposed Permit

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT PERMIT REVISION

[A.A.C. R18-2-317]

- A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:
 - 1. The changes are not modifications under any provision of Title I of the Act or under A.R.S. § 49-401.01(17).
 - 2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.
 - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.
 - 4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).
 - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.
- C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:
 - 1. When the proposed change will occur.
 - 2. A description of each such change.
 - 3. Any change in emissions of regulated air pollutants.
 - 4. The pollutants emitted subject to the emissions trade, if any.
 - 5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.
 - 6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.

Proposed Permit

7. Any permit term or condition that is no longer applicable as a result of the change.

XVIII. PERFORMANCE TESTING REQUIREMENTS

[A.A.C.R18-2-312]

A. Operational Conditions During Performance Testing

Performance tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

B. Performance Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

C. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

D. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

E. Report of Final Test Results

Proposed Permit

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE

[A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD

[A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Attachment "C" of this permit. The permit shield shall not apply to any changes made pursuant to Section XVI.B of this Attachment and Section XVII of this Attachment.

XXII. ACID RAIN

A. When provisions or requirements of the regulations incorporated pursuant to A.A.C. R18-2-333.A (Acid Rain) conflict with any of the applicable requirements, the regulations incorporated by A.A.C. R18-2-333.A (Acid Rain) shall apply and take precedence.

[A.A.C. R18-2-333]

B. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement.

[A.A.C. R18-2-306.A.6.a]

C. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

[A.A.C. R18-2-306.A.6.b]

D. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Act.

[A.A.C. R18-2-306.A.6.c]

E. All of the following are prohibited:

1. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or the operators of the unit or the designated representative of the owners or the operators as of the applicable allowance transfer deadline;
2. Exceedances of applicable emission rates;
3. The use of any allowance prior to the year for which it was allocated; and
4. Contravention of any other provision of the permit.

[A.A.C. R18-2-306.A.6.d]

Proposed Permit

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

I. EMISSION LIMITS/STANDARDS

A. Steam Units 2 and 3

1. Opacity Standard

The opacity of emissions from the stack of each unit shall not be greater than 20 percent except for periods of startup, shutdown, and malfunction as defined below and for one six-minute period per hour of not more than 27 percent opacity.

[40 CFR 60.42(a)(2), 60.11(c), and A.A.C. R18-2-331]

a. Startup

Start-up means the setting in operation of Steam Unit 2 or 3 for any purpose. Start-up sequence begins with the start of Steam Unit 2 or 3 boiler seal air fans. During start-up the Steam Unit 2 and 3 electrostatic precipitator (ESP) shall be placed in service as soon as practicable after initial start-up, but not until the ESP minimum inlet gas temperature remains at the manufacturer's design of 525 degrees Fahrenheit for a period of one-half hour. The minimum inlet temperature of gases entering the ESP shall be achieved utilizing natural gas ignitors. Steam Unit 2 and 3 sulfur dioxide absorption system (SDAS) shall be placed into service within one hour after coal has begun to be fired in the boiler. Start-up shall be considered completed when the ESP has been placed in service.

b. Shutdown

Shutdown means the cessation of operations of Steam Unit 2 or 3 for any purpose. The normal shutdown sequence begins with the initiation of the boiler sootblowing cycle with the intent of removing the unit from service. The ESP shall remain in service until coal fires in the boiler are out, or the minimum inlet temperature to the ESP falls below the manufacturer's design of 525 degrees Fahrenheit. The SDAS shall remain in service until the last coal ball tube mill of that respective unit is removed from service.

c. Malfunction

Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care.

Proposed Permit

2. Particulate Matter Standard

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel. [40 CFR 60.42(a)(1)]

3. Sulfur Dioxide Standard

a. Coal

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from coal. [A.A.C. R18-2-903.1]

b. Used Oil Fuel

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from used oil fuel. [40 CFR 60.43(a)(1)]

c. Combination Fuel

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain sulfur dioxide in excess of 340 nanograms per joule heat input (0.8 pounds per million Btu) derived from co-firing different fossil fuels. [A.A.C. R18-2-306.A.2]

d. Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels. [40 CFR 60.43(c)]

4. Nitrogen Oxide Standard

a. Coal

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 300 nanograms per joule heat input (0.70 lb per million Btu) derived from coal. [40 CFR 60.44(a)(1)]

b. Natural Gas

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 86 nanograms per joule heat input (0.20 lb per million Btu) derived from natural gas. [40 CFR 60.44(a)(1)]

c. Used Oil Fuel

Proposed Permit

Permittee shall not cause to be discharged into the atmosphere from the stack of each unit any gases which contain nitrogen oxides, expressed as NO₂ in excess of 129 nanograms per joule heat input (0.30 lb per million Btu) derived from used oil fuel. [40 CFR 60.44(a)(2)]

d. Combination Fuels

When different fossil fuels are burned simultaneously in any combination the applicable standard (in ng/J) is determined by proration using the following formula: [40 CFR 60.44(b)]

$$PS_{NOX} = \frac{w(260) + x(86) + y(130) + z(300)}{w+x+y+z}$$

Where:

PS_{NOX} = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = is the percentage of total heat input derived from lignite;

x = is the percentage of total heat input derived from gaseous fossil fuel;

y = is the percentage of total heat input derived from liquid fossil fuel; and

z = is the percentage of total heat input derived from solid fossil fuel (except lignite).

5. Fuel Limitation

a. Permittee shall burn only the following as fuel in the units:

- (1) Coal;
- (2) Natural gas;
- (3) Co-firing of coal and used oil fuel subject to Section V of this Attachment; and
- (4) Co-firing of coal and natural gas.

B. Steam Unit 1/Combined Cycle Operation of Steam Unit 1 and Gas Turbine No. 1

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 40 percent, measured in accordance with EPA Reference Method 9. [A.A.C.R18-2-702.B]

2. Particulate Matter Standard

Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769}$$

Proposed Permit

- E = the maximum allowable particulate matter emissions rate in pounds -mass per hour
Q = the heat input in million Btu per hour

[A.A.C. R18-2-703.C.1]

3. Sulfur Dioxide Standard

Liquid Fuel

Permittee shall not cause, allow, or permit emissions of more than 1.0 pound sulfur dioxide maximum three hour average per million BTU heat input.

[A.A.C.R18-2-703.E.1]

4. Fuel Limitation

- a. Permittee shall not use high sulfur oil (fuel sulfur content $\geq 0.90\%$ by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. [A.A.C.R18-2-703.H]
- b. Permittee shall burn only the following as fuel in Steam Unit 1:
- (1) Natural gas;
 - (2) Fuel oil nos. 2 through 6;
 - (3) Co-firing of fuel oil nos. 2 through 6 and used oil or used oil fuel subject to Section V of this Attachment; and
 - (4) Co-firing natural gas and fuel oil nos. 2 through 6.
- c. Permittee shall burn only the following as fuel during combined cycle operation:
- (1) Gas Turbine No. 1
 - (a) Natural gas; or
 - (b) Fuel oil no. 2.
 - (2) Steam Unit 1
 - (a) Natural gas;
 - (b) Fuel oil nos. 2 through 6;
 - (c) Co-firing of fuel oil nos. 2 through 6 and used oil or used oil fuel subject to Section V of this Attachment; and
 - (d) Co-firing natural gas and fuel oil nos. 2 through 6.

5. Definition of Heat Input

Proposed Permit

- a. For the purposes of conditions I.B.2 and I.B.3 of this Attachment, “heat input” is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The heat content of solid fuel shall be determined in accordance with A.A.C. R18-2-311. Compliance tests shall be conducted during operation at the nominal rated capacity of the unit.
[A.A.C.R18-2-703.B]
- b. The total heat input from the burning of all fuels in Steam Unit 1 shall be computed as follows:

$$TotalHeatInput = \sum_{i=1}^k (NHV_i) x (U_i)$$

Where:

NHV_i = Net heating value of each fuel “i” at standard temperature and pressure; and
 U_i = Fuel firing rate of each fuel “i”. [A.A.C. R18-2-306.A.2]

- c. The total heat input from the burning of all fuels during combined cycle operation shall be computed as follows:

$$TotalHeatInput = \sum_{j=1}^n \sum_{i=1}^k (NHV_{i,j}) x (U_{i,j})$$

Where:

NHV_i = Net heating value of each fuel “i” at standard temperature and pressure fired in each unit “j” forming the combined cycle operation; and
 U_i = Fuel firing rate of each fuel “i” in each unit “j”.
[A.A.C. R18-2-306.A.2]

C. Gas Turbine Nos. 1, 2, and 3 and Gas Turbine 1 Startup Diesel Engine

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period of time greater than ten consecutive seconds which exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

[A.A.C. R18-2-719.E]

2. Particulate Matter Standard

Proposed Permit

Permittee shall not cause, allow, or permit the emission of particulate matter, caused by combustion of fuel, from any of the stacks of stationary rotating machinery in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769} \text{ where:}$$

E= the maximum allowable particulate emissions rate in pounds-mass per hour.

Q= the heat input in million Btu per hour. [A.A.C. R18-2-719.C]

3. Sulfur Dioxide Standard

Liquid Fuel

Permittee shall not cause, allow, or permit emissions of more than 1.0 pounds of sulfur dioxide per million Btu heat input. [A.A.C. R18-2-719.F]

4. Fuel Limitation

a. Permittee shall not use high sulfur oil (fuel sulfur content $\geq 0.90\%$ by weight) as a fuel unless the Permittee demonstrates to the satisfaction of the Director that sufficient quantities of low sulfur oil are not available for use by the source and that it has adequate facilities and contingency plans to insure that the sulfur dioxide ambient air quality standards set forth in A.A.C. R18-2-202 will not be violated. [A.A.C. R18-2-719.H]

b. Permittee shall burn only the following as fuel in the following units:

(1) Gas Turbine Nos. 1 and 2

- (a) Natural gas;
- (b) Fuel oil no. 2; or

(2) Gas Turbine No. 3

- (a) Natural gas;
- (b) Fuel oil nos. 2 through 6; and

[A.A.C. R18-2-306.A.2]

5. Definition of Heat Input

a. For the purposes of conditions I.C.2 and I.C.3 of this Attachment, "heat input" is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. Compliance tests shall be conducted during operation at the nominal rated capacity of each unit.

[A.A.C. R18-2-719.B]

b. The total heat input from the burning of all fuels shall be computed as follows:

Proposed Permit

$$TotalHeatInput = \sum_{j=1}^n \sum_{i=1}^k (NHV_{ij}) x (U_{ij})$$

Where:

NHV_i = Net heating value of each fuel “i” at standard temperature and pressure fired in each unit “j”; and

U_i = Fuel firing rate of each fuel “i” in each unit “j”.

[A.A.C. R18-2-306.A.2]

D. Hot Water Heater and Space Heaters

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere from the hot water heater and space heaters smoke which exceeds 15 percent opacity.

[A.A.C. R18-2-724.J]

2. Particulate Matter Standard

[A.A.C. R18-2-724.C.1]

Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the hot water heater and space heaters in excess of the amount calculated by the following equation:

$$E = 1.02 Q^{0.769} \quad \text{where:}$$

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

Q = the heat input in million Btu per hour.

3. Fuel Limitation

Permittee shall burn only the following as fuel:

- a. in the hot water heater:
 - (1) Propane.
- b. in the space heaters:
 - (1) Natural gas.

4. Definition of Heat Input

- a. For the purposes of conditions I.D.2 of this Attachment, “heat input” is defined as the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The heat content of solid fuel shall be determined in accordance with A.A.C. R18-2-311. Compliance tests shall be conducted during operation at the nominal rated capacity of each unit.

[A.A.C. R18-2-724.B]

Proposed Permit

- b. The total heat input from the burning of all fuels shall be computed as follows:

$$Total\ Heat\ Input = \sum_{j=1}^n \sum_{i=1}^k (NHV_{ij}) \times (U_{ij})$$

Where:

NHV_i = Net heating value of each fuel “i” at standard temperature and pressure fired in each unit “j”; and

U_i = Firing rate of each fuel “i” in each unit “j”.

[A.A.C. R18-2-306.A.2]

E. Coal Preparation Plant

1. Units Subject to New Source Performance Standards Under 40 CFR 60, Subpart Y (Railcar Unloading Feeder Nos. 1 through 8, Screen Feeders, Crusher, Screening Units, Conveyor Nos. 1, 2, 6, 7, 8, and 9, Transfer Chute from Conveyor No. 1 to Conveyor No. 6, and Transfer Hopper Downstream of Crusher)

On and after the date on which the performance test required to be conducted by IV.D.1 of this Attachment is completed, Permittee shall not cause to be discharged into the atmosphere from any equipment listed above gases which exhibit 20 percent opacity or greater.

[40 CFR 60.252(c) and A.A.C. R18-2-331]

2. Units Subject to Standards of Performance for Unclassified Sources A.A.C. R18-2-730 (Conveyor Nos. 3, 4a, 4b, 5-2, and 5-3, Feeder Nos. 9 through 13, Transfer Chute from Conveyor No. 1 to Conveyor No. 2, Enclosed Transfer Chute Nos. 4A and 4B, Coal Silos, Transfer Chute from Conveyor No. 1 to Conveyor Nos. 4a and 4b)

a. Opacity

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any equipment listed above in excess of 40 percent opacity, measured in accordance with the EPA Reference Method 9.

[A.A.C. R18-2-610 and 702.B]

b. Particulate Matter

[A.A.C. R18-2-730.A.1.b]

Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any equipment listed above in total quantities in excess of the amounts calculated by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

Proposed Permit

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

F. Limestone Handling System

1. Opacity

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any limestone handling operation in excess of 40 percent opacity, measured in accordance with the EPA Reference Method 9. [A.A.C. R18-2-610 and 702.B]

2. Particulate Matter [A.A.C. R18-2-730.A.1.a]

Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any limestone preparation operation in total quantities in excess of the amounts calculated by the following equation:

$$E = 4.10P^{0.67}$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

G. Cooling Towers 1, 2, and 3

1. Opacity Standard

Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent the opacity of which exceeds 40 percent, measured in accordance with EPA Reference Method 9. [A.A.C. R18-2-702.B]

2. Particulate Matter Standard

Permittee shall not cause, allow or permit the emission of particulate matter in excess of the amounts calculated by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour; and

P = the process weight rate in tons-mass per hour. [A.A.C. R18-2-730.A.1]

3. Permittee shall not emit gaseous or odorous materials from equipment, operations, or premises in such quantities or concentrations to cause air pollution. [A.A.C. R18-2-730.D]

Proposed Permit

4. Where a stack, vent, or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce, or eliminate the discharge of air pollution to adjoining property. [A.A.C.R18-2-619.G]
- H. Non-Point Sources
1. Open Areas, Roadways & Streets, Storage Piles, and Material Handling
 - a. Permittee shall not cause, allow or permit visible emissions from open areas, roadways and streets, storage piles or material handling in excess of 40 % opacity measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C.R18-2-610]
 - b. Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (1) Use approved dust suppressants, adhesive soil stabilizer, paving, covering, detouring, or wetting agents on, or bar access to open areas during construction operations, repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated; [A.A.C.R18-2-604.A]
 - (2) Use approved dust suppressants, adhesive soil stabilizer, or paving on, or bar access to driveways, parking areas, and vacant lots where motor vehicular activity occurs; [A.A.C.R18-2-604.B]
 - (3) Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed; [A.A.C.R18-2-605.A]
 - (4) Use dust suppressants, wetting agents, or cover the load adequately when transporting material likely to give rise to airborne dust; [A.A.C.R18-2-605.B]
 - (5) Use spray bars, hoods, wetting agents, dust suppressants, or cover when crushing, screening, handling, transporting, or conveying material that is likely to give rise to airborne dust; [A.A.C.R18-2-606]
 - (6) Adequately cover, or use wetting agents, chemical stabilization, or dust suppressants when stacking, piling, or otherwise storing organic or inorganic dust producing material; [A.A.C.R18-2-607.A]
 - (7) Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material and with the use of spray bars and wetting agents; [A.A.C.R18-2-607.B]

Proposed Permit

- (8) Use wetting agents or dust suppressants before the cleaning of site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means; or [A.A.C.R18-2-804.B]
- (9) Any other method as proposed by the Permittee and approved by the Director.

2. Open Burning [A.A.C.R18-2-602]

Except as provided in A.A.C. R18-2-602.C(1), C(3), and C(4), and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits the Permittee shall not conduct open burning.

I. Other Periodic Activities

1. Abrasive Blasting [A.A.C. R18-2-726]

- a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:
 - (1) wet blasting;
 - (2) effective enclosures with necessary dust collecting equipment; or
 - (3) any other method as approved by the Director.
- b. Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40% opacity as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

2. Use of Paints

While performing spray painting operations the Permittee shall comply with the following requirements:

- a. The Permittee shall not conduct any spray painting operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C.R18-2-727.A]
- b. The Permittee shall not either:
 - (1) Employ, apply, evaporate or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
 - (2) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]

Proposed Permit

- c. For the purposes of parts b. and e. of this condition, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in paragraphs (1) through (3) of this subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:
- (1) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones : five percent
 - (2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent
 - (3) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent [A.A.C.R18-2-727.C]
- d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described in subsection c(1) through c(3) of this condition, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents. [A.A.C.R18-2-727.D]
- e. The Permittee shall not dispose by evaporation more than 1.5 gallons of photochemically reactive solvent in any one day. [SIP Provision R9-3-527.C]
- f. Visible emissions from spray painting operations shall not have an opacity greater than 40%, measured in accordance with by EPA Reference Method 9. [A.A.C.R18-2-702.B]
3. Solvent Degreasing and Gasoline and Fuel Oil Transfer and Dispensing
- Permittee shall process, store, use, and transport materials including solvents or volatile compounds in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]
4. Landfill Operations
- Permittee shall not emit gaseous or odorous materials from the landfill operations in such quantities or concentrations to cause air pollution. [A.A.C. R18-2-730.D]
5. Mobile Sources
- a. Classification
- The requirements of this condition are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or

Proposed Permit

are agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.84.

[A.A.C. R18-2-801]

b. Off-road Machinery

Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Off-road machinery shall include trucks, graders, scrapers, rollers and other construction and mining machinery not normally driven on a completed public roadway.

[A.A.C. R18-2-802]

c. Roadway and Site Cleaning Machinery

Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

[A.A.C. R18-2-804.A]

6. Demolition/Renovation

The Permittee shall comply with the applicable requirements of 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos).

[A.A.C.R18-2-1101.A.8]

7. Nonvehicle Air Conditioner Maintenance and/or Services

The Permittee shall comply with the applicable requirements of 40 CFR 82 - Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction).

[40 CFR 82, Subpart F]

II. AIR POLLUTION CONTROL EQUIPMENT

[A.A.C. R18-2-306.A.2 and 331]

A. Steam Unit 2 and 3

1. Particulate Matter

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the electrostatic precipitators in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331]

2. Sulfur Dioxide

Proposed Permit

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the sulfur dioxide absorption systems in a manner consistent with good air pollution control practice for minimizing sulfur dioxide emissions.

[40 CFR 60.11(d) and A.A.C. R18-2-331]

B. Coal Preparation Plant

1. Wet dust suppression shall be maintained and operated at the feeders during railcar unloading, at the screen feeders during screening, and at the entrance and exit of the crusher during crushing in a manner consistent with good air pollution control practices.
2. Permittee shall maintain and operate at all times the baghouse used to capture particulate matter emissions associated with the coal silos in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-306.A.2 and 331]

C. Limestone Handling System

Permittee shall maintain and operate at all times the limestone bin bag filter used to capture particulate matter emissions associated with limestone storage bin in a manner consistent with good air pollution control practices.

[A.A.C. R18-2-306.A.2 and 331]

III. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

- A. Within 180 days of issuance of this permit the owner or operator shall have on staff a person that is certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3]
- B. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring activities required by Section III of this Attachment performed in the same six month period as applies to the compliance certification period. [A.A.C. R18-2-306.A.5.a]
- C. Permittee shall log in ink or in an electronic format a record of any change in fuel type including:
 1. Type of fuel change;
 2. Date of the fuel change; and
 3. Time of the fuel change.[A.A.C. R18-2-306.A.3.b]
- D. Monitoring, Recordkeeping, and Reporting Requirements for Steam Units 2 and 3
 1. Monitoring for Opacity, SO₂, NO_x, and CO₂
 - a. Permittee shall calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, and carbon dioxide. [40 CFR 60.45(a)]
 - b. The continuous emission monitoring systems for SO₂, NO_x, and CO₂ shall meet the following requirements:

Proposed Permit

(1) 40 CFR Part 75, Appendix A, "Specification and Test Procedures"

- (a) Installation and measurement location
- (b) Equipment specifications
- (c) Performance specifications
- (d) Data acquisition and handling systems
- (e) Calibration gas
- (f) Certifications tests and procedures
- (g) Calculations

(2) 40 CFR Part 75, Appendix B, "Quality Assurance and Quality Control Procedure"

- (a) Quality control program
- (b) Frequency of testing

(3) Data Reduction

Permittee shall comply with the data reduction requirements of 40 CFR Part 75.10(d)(1).

c. Permittee shall comply with all the recordkeeping and reporting requirements of 40 CFR Part 75 Subparts F and G respectively.

d. The continuous opacity monitoring system shall meet the following requirements:

(1) 40 CFR 60, Appendix B, Performance Specification 1, "Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources"

- (a) Apparatus
- (b) Installation Specifications
- (c) Design and Performance Specifications
- (d) Design Specifications Verification Procedure
- (e) Performance Specifications Verification Procedure
- (f) Equations [40 CFR 60.13(a)]

(2) The following quality assurance requirements:

(a) Calibration Checks

Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 % of span value) calibration drifts at least once daily in accordance with a written procedure.

[40 CFR 60.13(d)(1) and 40 CFR 60, Appendix B, PS1, 5.2]

(b) Zero and Span Drift Adjustments

Proposed Permit

- i) The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 4% opacity. [40 CFR 60.13(d)(1)]
- ii) The system shall allow for the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified. [40 CFR 60.13(d)(1)]
- iii) The optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments, except for systems using automatic zero adjustments. [40 CFR 60.13(d)(1)]
- iv) For systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4% opacity. [40 CFR 60.13(d)(1)]

(c) System Checks

A method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam to provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly shall be used by the Permittee. [40 CFR 60.13(d)(2)]

(d) Minimum Frequency of Operation

Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the continuous opacity monitoring system (COMS) shall be in continuous operation and shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. [40 CFR 60.13(e)(1)]

(e) Data Reduction and Missing Data [40 CFR 60.13(h)]

- i) Permittee shall reduce all data from the COMS to 6-minute averages. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.
- ii) Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages

Proposed Permit

computed under the previous paragraph. An arithmetic or integrated average of all data may be used.

(f) The following requirements from Installation permit No. 031204:

i) Annual Preventative Maintenance

AEPCO shall perform clear-stack alignment on opacity transmissometers.

2. Monitoring for Particulate Matter [A.A.C. R18-2-306.A.3.b]

- a. Permittee shall evaluate opacity measurements from the COMS on a 24-hr rolling average excluding periods of startup, shutdown, and malfunction. If the 24-hr rolling average opacity exceeds 15 percent, permittee shall initiate investigation of the control equipment within 24 hours for possible corrective action. If corrective action is required, permittee shall proceed to implement such corrective action as soon as practicable in order to minimize possible exceedances of opacity and/or particulate standard established in Paragraphs I.A.1 and I.A.2 of this Attachment.
- b. A 24-hr rolling average of the opacity above 15% does not in itself constitute a violation of either the opacity or the particulate standard nor is it implied that an opacity measurement and a particulate matter correlation exists.
- c. Permittee shall log in ink or electronic format and maintain a record of 24-hr opacity measurements performed in accordance with paragraph (a) above and any corrective actions taken. A record of corrective actions taken shall include recording the date and time of the event and the date and time corrective action, if any, is completed.

3. Excess Emissions

- a. Excess emission and monitoring system performance (MSP) reports for Steam Units 2 and 3 shall be submitted to the Department and EPA Region IX for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information required in III.D.3.c. Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows: [40 CFR 60.45(g)]

(1) Opacity

Excess emissions for Units 2 and 3 are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported. [40 CFR 60.45(g)(1)]

(2) Sulfur Dioxide

Proposed Permit

Excess emissions for Units 2 and 3 are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceeds the applicable standard in Section I.A.3 of this Attachment.

[40 CFR 60.45(g)(2)]

(3) Nitrogen Oxides.

Excess emissions for Units 2 and 3 using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards in Section I.A.4 of this Attachment.

[40 CFR 60.45(g)(3)]

- b. The summary quarterly report form submission required in paragraph III.D.3.a above shall be in the format specified in 40 CFR 60.7(d). The excess emissions report shall include the following information: [40 CFR 60.7(c)]

- (1) The magnitude of excess emissions computed, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the CMS was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the CMS(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

- c. In addition to 3.a and 3.b above, Permittee shall report emissions exceeding an emission limitation or standard as deviations in accordance with Section XII.B of Attachment "A" of this permit. [A.A.C. R18-2-306.A..5.b]

E. Monitoring, Recordkeeping, and Reporting Requirements for Steam Unit 1/Combined Cycle Operation of Steam Unit 1 and Gas Turbine No. 1

1. Visible Emissions while Burning Liquid Fuel [A.A.C. R18-2-306.A.3.b]

Permittee shall monitor opacity according to the following schedule:

Proposed Permit

- a. If liquid fuel is combusted in the unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading will be observed at the exit of the unit's stack.
- b. If liquid fuel is combusted in the unit continuously for a time period greater than 168 hours, at least one opacity reading will be observed during each 168 hour period at the exit of the unit's stack.

All opacity readings will be observed in accordance with EPA Reference Method 9. Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned continuously.

2. Particulate Matter and Sulfur Dioxide while Burning Liquid Fuel

- a. Permittee shall keep on record the contractual agreement with the liquid fuel vendor indicating the following information concerning the liquid fuel being fired for each shipment of fuel oil:
 - (1) The name of the fuel oil supplier;
 - (2) The heating value of the fuel oil;
 - (3) The density of the fuel oil;
 - (4) The ash content of the fuel oil;
 - (5) The sulfur content of the fuel oil from which the shipment came;
 - (6) The method used to determine the ash content of the fuel oil; and
 - (7) The method used to determine the sulfur content of the fuel oil.

[A.A.C. R18-2-306.A.3.b]

- b. Permittee shall maintain records of all emissions calculations performed for any change in (2), (3), or (5) above using the following equation:

$$\text{SO}_2 \text{ (lb/MMBtu)} = 2.0 \times [(\text{Weight percent of sulfur}/100) \times \text{Density (lb/gal)}] / [(\text{Heating value (Btu/gal)}) \times (1 \text{ MMBtu}/1,000,000 \text{ Btu})]$$

[A.A.C. R18-2-306.A.3.b]

F. Monitoring, Recordkeeping, and Reporting Requirements for Gas Turbine Nos. 1, 2, and 3 and Gas Turbine 1 Startup Diesel Engine

1. Visible Emissions while Burning Liquid Fuel

[A.A.C. R18-2-306.A.3.b]

Permittee shall monitor opacity according to the following schedule:

- a. If liquid fuel is burned in a unit continuously for a time period greater than 48 hours but less than 168 hours, at least one opacity reading will be observed at the exit of the unit's stack.
- b. If liquid fuel is burned in a unit continuously for a time period greater than 168 hours, at least one opacity reading will be observed during each 168 hour period at the exit of the unit's stack.

Proposed Permit

All opacity readings will be observed in accordance with EPA Reference Method 9. Permittee shall log in ink or in an electronic format and maintain a record of the opacity readings from above and the number of hours fuel oil is burned continuously.

2. Particulate Matter while Burning Liquid Fuel [A.A.C. R18-2-306.A.3.b]

Permittee shall keep on record, along with the fuel firing rate, the contractual agreement with the liquid fuel vendor indicating the following information concerning the liquid fuel being fired:

- a. The lower heating value; and
- b. The ash content.

3. Sulfur Dioxide [A.A.C. R18-2-719.I]

a. While Burning Gaseous Fuel

Permittee shall maintain a vendor-provided copy of that part of the Federal Energy Regulatory Commission (FERC)-approved Tariff agreement that contains the sulfur content and the lower heating value of the pipeline quality natural gas.

b. While Burning Liquid Fuel

Permittee shall keep records of fuel supplier certification including the following information:

- (1) The name of the oil supplier;
- (2) The sulfur content and the heating content of the oil from which the shipment came; and
- (3) The method used to determine the sulfur content of the oil.

Permittee shall maintain records of all emissions calculations performed for any change in (2) above using the following equation:

$$\text{SO}_2 \text{ (lb/MMBtu)} = 2.0 \times [(\text{Weight percent of sulfur}/100) \times \text{Density (lb/gal)}] / [(\text{Heating value (Btu/gal)}) \times (1 \text{ MMBtu}/1,000,000 \text{ Btu})]$$

4. Dates and Hours of Operation [A.A.C. R18-2-306.A.4]

Permittee shall record the dates and hours of operation for each piece of stationary rotating machinery. Performance test shall be triggered for each unit according to the following schedule:

a. Gas Turbine No. 1

Performance test shall be considered to be triggered for this unit when this unit has been operated for 1575 hours on a twelve month rolling total basis. The number of

Proposed Permit

hours does not include the combined cycle operation of Gas Turbine No. 1 and Steam Unit 1.

b. Gas Turbine No. 2

Performance test shall be considered to be triggered for a unit when that unit has been operated for 1160 hours on a twelve month rolling total basis.

c. Gas Turbine No. 3

Performance test shall be considered to be triggered for a unit when that unit has been operated for 370 hours on a twelve month rolling total basis.

5. Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the stationary rotating machinery exceeds 0.8 percent.

[A.A.C. R18-2-719.J]

6. Permittee shall submit the following information:

a. The dates and hours of operation of each unit for the period of each compliance certification.

b. Until a performance test pursuant to Section IV.C of this attachment is completed, Permittee shall report the status of the testing requirements.

[A.A.C. R18-2-306.A.5]

G. Monitoring, Recordkeeping, and Reporting Requirements for Hot Water Heater and Space Heaters

Permittee shall report all six-minute periods in which the opacity of any plume or effluent exceeds 15 percent from the hot water heater and space heaters.

[A.A.C. R18-2-724.J]

H. Monitoring, Recordkeeping, and Reporting Requirements for Coal Preparation Plant

[A.A.C. R18-2-306.A.3.b and 331]

1. Units Subject to New Source Performance Standards Under 40 CFR 60, Subpart Y (Railcar Unloading Feeder Nos. 1 through 8, Screen Feeders, Crusher, Screening Units, Conveyor Nos. 1, 2, 6, 7, 8, and 9, Transfer Chute from Conveyor No. 1 to Conveyor No. 6, and Transfer Hopper Downstream of Crusher)

a. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the listed units when they are in operation. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

b. If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed 20% opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.

c. If the six-minute opacity of the plume exceeds 20%, Permittee shall do the following:

Proposed Permit

- (1) Adjust or repair the controls or equipment to reduce opacity to below 20%; and
 - (2) Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.
 - d. If the six-minute opacity of the plume is less than 20%, the observer shall make a record of the following:
 - (1) Date and time of the test; and
 - (2) The results of the Method 9 observation.
2. Units Subject to Standards of Performance for Unclassified Sources A.A.C. R18-2-730 (Conveyor Nos. 3, 4a, 4b, 5-2, and 5-3, Feeder Nos. 9 through 13, Transfer Chute from Conveyor No. 1 to Conveyor No. 2, Enclosed Transfer Chute Nos. 4A and 4B, Coal Silos, Transfer Chute from Conveyor No. 1 to Conveyor Nos. 4a and 4b)
 - a. Opacity
 - (1) A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the listed units when they are in operation. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation
 - (2) If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed 40% opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.
 - (3) If the six-minute opacity of the plume exceeds 40%, Permittee shall do the following:
 - (a) Adjust or repair the controls or equipment to reduce opacity to below 40%; and
 - (b) Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.
 - (4) If the six-minute opacity of the plume is less than 40%, the observer shall make a record of the following:
 - (a) Date and time of the test; and
 - (b) The results of the Method 9 observation.
 - b. Particulate Matter
 - (1) Permittee shall maintain and operate the coal dust collection system on the coal silos in accordance with the manufacturer's specifications. These specifications shall be on file and shall be readily available for inspection by the Department.

Proposed Permit

- (2) Permittee shall maintain records of emissions related maintenance performed on the coal dust collection system.

I. Monitoring, Recordkeeping, and Reporting Requirements for Limestone Handling System

1. Opacity [A.A.C. R18-2-306.A.3.b]

- a. A certified Method 9 observer shall conduct a weekly visual survey of visible emissions from the limestone handling system when it is in operation. This weekly observation shall include observation of all exposed transfer points, enclosed transfer points, and the bag filter. Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation
- b. If the observer sees a plume from an emission point that on an instantaneous basis appears to exceed 40% opacity, the observer shall if possible take a six-minute Method 9 observation of the plume.
- c. If the six-minute opacity of the plume exceeds 40%, Permittee shall do the following:
 - (1) Adjust or repair the controls or equipment to reduce opacity to below 40%; and
 - (2) Report it as an excess emission in accordance with Section XII.A of Attachment A of this permit.
- d. If the six-minute opacity of the plume is less than 40%, the observer shall make a record of the following:
 - (1) Date and time of the test; and
 - (2) The results of the Method 9 observation.

2. Particulate Matter

- a. Permittee shall maintain and operate the limestone bin bag filter in accordance with the manufacturer's specifications. These specifications shall be on file and shall be readily available for inspection by the Department.
- b. Permittee shall maintain records of emissions related maintenance performed on the limestone bin bag filter.

[A.A.C. R18-2-306.A.3.b]

J. Monitoring, Recordkeeping, and Reporting Requirements for Non-Point Sources

[A.A.C. R18-2-306.A.3.b]

1. Open Areas, Roadways & Streets, Storage Piles and Material Handling

Permittee shall maintain records of the dates on which any of the activities listed in I.H.1.b.(1) through (9) of this Attachment were performed and control measures employed.

2. Open Burning

Proposed Permit

The monitoring requirements for I.H.2 of this Attachment may be complied with by maintaining copies of all open burning permits on file.

K. Monitoring, Recordkeeping, and Reporting Requirements for Other Periodic Activities

[A.A.C. R18-2-306.A.3.b]

1. Abrasive Blasting

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

2. Use of Paints

a. Each time a spray painting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

- (1) The date the project was conducted;
- (2) The duration of the project;
- (3) Type of control measures employed; and
- (4) Material Safety Data Sheets for all paints and solvents used in the project.

b. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of part a. above.

3. Mobile Sources

Permittee shall keep a record of all emissions related maintenance activities performed on Permittee's mobile sources stationed at the facility as per manufacturer's specifications.

4. Demolition/Renovation

Permittee shall keep all required records in a file. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

5. Nonvehicle Air Conditioner Maintenance and/or Services

Permittee shall keep all records required by the applicable requirements of 40 CFR 82 - Subpart F in a file.

IV. TESTING REQUIREMENTS

- A. For the purpose of this permit, the EPA Reference Method 9 reading shall be defined as an average of 24 consecutive opacity observations recorded at 15-second intervals. A set is composed of any

Proposed Permit

24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. [40 CFR 60, Appendix A, Method 9, Section 2.5]

B. Steam Units 2 and 3

1. Emission Rate

The emission rate (E) of particulate matter, SO₂, or NO_x shall be calculated for each run using the following equation: [40 CFR 60.46(b)(1)]

$$E = C F_d (20.9)/(20.9 - \% O_2)$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

%O₂ = oxygen concentration, percent dry basis.

F_d = factor as determined from Method 19.

2. Particulate Matter

Permittee shall perform an annual performance test to determine the particulate matter concentration using EPA Reference Method 5, 5B, or 17 in accordance with 40 CFR 60.46. [40 CFR 60.46(b)(2)]

3. Sulfur Dioxide

Permittee shall perform an annual performance test to determine the sulfur dioxide concentration using EPA Reference Method 6 or 6C in accordance with 40 CFR 60.46. [40 CFR 60.46(b)(4)]

4. Nitrogen Oxides

Permittee shall perform an annual performance test to determine the nitrogen oxides concentration using EPA Reference Method 7 or 7E in accordance with 40 CFR 60.46. [40 CFR 60.46(b)(5)]

5. Opacity

Permittee shall perform an annual performance test to determine opacity using EPA Reference Method 9. [40 CFR 60.46(b)(3)]

C. Gas Turbines

1. Permittee shall conduct one set of performance tests on Gas Turbine Nos. 1 and 2 for nitrogen oxides and carbon monoxide based on the schedule given in Section III.F.4 of this Attachment within six months of the trigger date.

Proposed Permit

2. Permittee shall conduct one set of performance tests on Gas Turbine No. 3 for nitrogen oxides, particulate matter, VOCs, and carbon monoxide based on the schedule given in Section III.F.4 of this Attachment within six months of the trigger date.
3. Permittee shall use USEPA Reference Methods 20, 10, 5, and 25 to conduct the performance test for nitrogen oxides, carbon monoxide, particulate matter, and VOCs respectively as specified in the Arizona Testing Manual for Air Pollutant Emissions.

D. Coal Preparation Plant

1. Within 60 days after achieving the maximum production rate at which the coal preparation plant will be operated, but no later than 180 days after the issuance of this permit and at other times as may be required by the Director, the Permittee shall conduct performance test(s) on units listed under I.E.1. and furnish the Director a written report of such performance test(s).

[40 CFR 60.8(a)]

2. Compliance with opacity standard in Section I.E.1 of this Attachment shall be determined by conducting observations in accordance with Reference Method 9 in 40 CFR 60, Appendix A and procedures in 40 CFR 60.11.

[40 CFR 60.254(b)(2)]

V. USED OIL FUEL

A. Specifications

[A.R.S. 49-426.G.1]

AEPCO may burn used oil or used oil fuel if the following conditions are met:

1. The flash point of the oil does not fall below 100° F;
2. The oil does not have following contaminants in excess of the following levels:
 - a. Arsenic 5 ppm
 - b. Cadmium 2 ppm
 - c. Chromium 10 ppm
 - d. Lead 100ppm
 - e. PCBs 2ppm
3. Used oil or used oil fuel blended with virgin fuel oil does not exceed 5% of the total fuel in any fuel storage tank.

B. Limitations

[A.R.S. 49-426.G.1]

1. Used oil or used oil fuel may be fired alone or co-fired with coal (in Steam Units 2 or 3) or fuel oil nos. 4 through 6 (in Steam Unit 1) for not more than a total of 40 hours in a year. Any increase in this number must be obtained through a revision to this permit.
2. Used oil or used oil fuel may be burned in either Steam Unit 1, 2, or 3.

C. Recordkeeping and Reporting Requirements

[A.R.S. 49-426.G.4]

Proposed Permit

1. All tests conducted pursuant to Section V.D of this Attachment shall be documented and a report submitted to the Department along with the semi-annual compliance certification.
2. AEPCO shall maintain such records as required to document the use of the above fuel including the following:
 - a. Dates on which used oil or used oil fuel was burned;
 - b. Hours of usage of the used oil or used oil fuel; and
 - c. The quantity of used oil or used oil fuel burned.

D. Testing

[A.R.S. 49-426.G.2]

A representative sample from each source of used oil or used oil fuel shall be tested for Arsenic, Cadmium, Chromium, Lead, and PCBs using approved EPA methods prior to burning.

Proposed Permit

ATTACHMENT "C": APPLICABLE REQUIREMENTS

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE

Compliance with the terms contained in this permit shall be deemed compliance with the following federally applicable requirements in effect on the date of permit issuance:

ARIZONA ADMINISTRATIVE CODE (A.A.C.) TITLE 18, Chapter 2

ARTICLE 6 **EMISSIONS FROM EXISTING AND NEW NONPOINT SOURCES**

R18-2-601	General
R18-2-602	Unlawful Open Burning
R18-2-604	Open Areas, Dry Washes, or Riverbeds
R18-2-605	Roadways and Streets
R18-2-606	Material Handling
R18-2-607	Storage Piles
R18-2-610	Evaluation of Nonpoint Source Emissions

ARTICLE 7 **EXISTING STATIONARY SOURCE PERFORMANCE STANDARDS**

R18-2-702.B	General Provisions
R18-2-703.B	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.C.1	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.E.1	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-703.H	Standards of Performance for Existing Fossil-fuel Fired Steam Generators and General Fuel-burning Equipment
R18-2-716	Standards of Performance for Existing Coal Preparation Plants
R18-2-720	Standards of Performance for Existing Lime Manufacturing Plants
R18-2-719.B	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.C.1	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.E	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.F	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.H	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.I	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-719.J	Standards of Performance for Existing Stationary Rotating Machinery
R18-2-724.A	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.B	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.C.1	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment
R18-2-724.J	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment

Proposed Permit

R18-2-726	Standards of Performance for Sandblasting Operations
R18-2-727	Standards of Performance for Spray Painting Operations

ATTACHMENT "C": APPLICABLE REQUIREMENTS (Contd.)

SIP R9-2-527.C	Standards of Performance for Spray Painting Operations
R18-2-730.A	Standards of Performance for Unclassified Sources
R18-2-730.D	Standards of Performance for Unclassified Sources
R18-2-730.F	Standards of Performance for Unclassified Sources
R18-2-730.G	Standards of Performance for Unclassified Sources

ARTICLE 8 **EMISSIONS FROM MOBILE SOURCES (NEW AND EXISTING)**

R18-2-801	Classification of Mobile Sources
R18-2-802	Off-road Machinery
R18-2-804	Roadway and Site Cleaning Machinery

ARTICLE 9 **NEW SOURCE PERFORMANCE STANDARDS**

R18-2-901.1	40 CFR 60, Subpart A, General Provisions
R18-2-901.2	40 CFR 60, Subpart D, Electric Utility Steam Generating Units for which Construction is Commenced After August 17, 1971
R18-2-903.1	Standards of Performance for Fossil-fuel Fired Steam Generators
R18-2-903.2	Standards of Performance for Fossil-fuel Fired Steam Generators
R18-2-901.31	40 CFR 60, Subpart Y, Coal Preparation Plants

ARTICLE 11 **FEDERAL HAZARDOUS AIR POLLUTANTS**

R18-2-1101.A.8	National Emission Standards for Hazardous Air Pollutants (NESHAPs), (by reference) 40 CFR 61, Subpart M - Asbestos
----------------	--

ARIZONA REVISED STATUTES(A.R.S.), CHAPTER 3, ARTICLE 2

A.R.S. 49-426.G	Permits; duties of director; exceptions; applications; objections; fees (STATE REQUIREMENT)
-----------------	---

ACCIDENTAL RELEASE PREVENTION PROGRAM

40 CFR 68	Chemical Accident Prevention Provisions
-----------	---

STRATOSPHERIC OZONE PROTECTION

40 CFR 82	Subpart F - Recycling and Reducing Emissions.
-----------	---

INSTALLATION PERMITS

Installation Permit No. 031161
Installation Permit No. 031204
Installation Permit No. 1223

Proposed Permit

Installation Permit No. 1202

ATTACHMENT "C": APPLICABLE REQUIREMENTS (Contd.)

REQUIREMENTS SPECIFICALLY IDENTIFIED AS NOT APPLICABLE

As requested by the Permittee, specific non-applicable requirements have been identified as follows. A permit shield is granted from these requirements.

40 CFR, Part 60, Subpart Da (NSPS for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978)

This regulation is not applicable to the Steam Generating Units 1, 2, or 3 because the units were constructed prior to September 18, 1978.

40 CFR, Part 60, Subpart D (NSPS for Electric Utility Steam Generating Units for Which Construction is Commenced After August 17, 1971)

This regulation is not applicable to the Steam Generating Unit 1 because this unit was constructed prior to August 17, 1971.

A.A.C. R18-2-313 (Existing Source Emission Monitoring)

This regulation is not applicable to Steam Generating Unit 1 for the following reasons: (1) gas, oil, or a mixture of gas and oil are the only fuels burned (A.A.C. R18-2-313.C.1.a); (2) this unit has never been found to be in violation of any visible emissions standard through any administrative or judicial proceedings (A.A.C. R18-2-313.C.1.a); (3) this unit has not installed pollution control equipment (A.A.C. R18-2-313.C.1.b); and (4) Steam Unit 1 is located in an attainment area for nitrogen oxides (A.A.C. R18-2-313.C.1.c).

A.A.C. R18-2-314 (Quality Assurance)

This regulation is not applicable to Apache Station because there are no facilities at Apache Station that are subject to A.A.C. R18-2-313. Further, AEPCO has not proposed alternative or equivalent test methods for testing of any other Apache Station facilities subject to the permit requirements of Article 3.

40 CFR, Part 60, Subparts K, Ka, Kb (NSPS for Volatile Organic Liquid Storage Vessels)

This regulation is not applicable to Apache Station's two 5,000,000 gallon fuel oil tanks, or two 1,000,000 gallon tanks because the tanks were constructed prior to 1984. This regulation does not apply to Apache Station's 10,000 gallon gasoline tank or 10,000 gallon diesel tank, constructed in 1992, because these tanks have design capacities below 40 cubic meters. Also, Subparts K, 60.111(b) and Ka, 60.111a(b) state that the standard does not apply to Nos. 2 through 6 fuel oils or diesel fuel oil.

A.A.C. R18-2-710 (Standards of Performance for Existing Storage Vessels for Petroleum Liquids)

This regulation is not applicable to Apache Station petroleum storage tanks constructed prior to 1984 because they have only been used to store Nos. 2 through 6 fuel oils, which are not considered "petroleum liquids" under R18-2-701.

40 CFR, Part 60, Subpart Y (NSPS for Coal Preparation Plants)

Proposed Permit

This regulation is not applicable to conveyors ## 3, 4a, 4b, 5-2, 5-3, transfer chute to conveyor #2, enclosed transfer chutes ## 4a and 4b, feeders ## 9 through 13, coal silos, transfer chute from conveyor #1 to conveyors ##4a and 4b because these facilities do not include equipment to crush, break, screen, wet or dry clean, or thermal dry coal that is required for applicability as described in Subpart Y. This regulation is also not applicable to the coal storage pile, because it is an affected facility under A.A.C. R18-2-607.

ATTACHMENT "C": APPLICABLE REQUIREMENTS (Contd.)

40 CFR, Part 60, Subpart OOO (NSPS for Non-metallic Mineral Processing)

This regulation is not applicable to Apache Station because the equipment used to crush and grind nonmetallic minerals was constructed before the Subpart OOO trigger date of August 31, 1983.

A.A.C. R18-2-716 (Standards of Performance for Existing Coal Preparation Plants)

None of the coal handling facilities at Apache Station are affected facilities as defined in A.A.C. R18-2-716.A.

A.A.C. R18-2-722 (Standards of Performance for Existing Gravel or Crushed Stone Processing Plants)

This regulation is not applicable to Apache Station because the limestone crushing operations, including associated conveyors, transfer points, storage piles, and storage bin, have been determined by ADEQ to be subject to R18-2-730.

40 CFR, Part 63, Subpart Q (NESHAP for Industrial Process Cooling Towers)

This regulation is not applicable to Apache Station because the cooling towers are not operated with chromium-based water treatment chemicals.

A.A.C. R18-2-730.A.2 and A.A.C. R18-2-730.A.3 (Standards of Performance for Unclassified Sources)

ADEQ has determined that the emission limits for sulfur dioxide and nitrogen oxides set forth in these rules are not applicable to any emission source at Apache Station.

Proposed Permit

ATTACHMENT "D": EQUIPMENT LIST

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

Permitted Equipment					
Equipment ID	Description	Size	Serial Number	Model	Date of Commercial Operation/ Manufacture
Steam Unit 1	Wall- fired steam electric generating unit	75 MW*	BW-21343	Babcock and Wilcox	1963
Steam Unit 2	Wall- fired steam electric generating unit	195 MW*	3911	Riley Stoker	1976
Steam Unit 3	Wall- fired steam electric generating unit	195 MW*	3912	Riley Stoker	1976
Gas Turbine 1	Simple cycle gas turbine generating unit	10.4 MW*	127756	General Electric Frame 5	1963
Gas Turbine 2	Simple cycle gas turbine generating unit	19.8 MW*	225962	MS-5000	1972
Gas Turbine 3	Simple cycle gas turbine generating unit	64.9 MW*	27A1101	Westinghouse W-501B2	1975
Gas Turbine 1 Startup Diesel Engine	Diesel engine for Startup of Gas Turbine 1	430 HP*	37129857	Cummins Vt-903-C	1990
Cooling Tower 1	Steam unit cooling tower	60,000 gpm	--	Davenport Cooling Tech 4ETF 4848.6.19	1995
Cooling Tower 2	Steam unit cooling tower	117,500 gpm	--	Marley 6615-3-09	1976
Cooling Tower 3	Steam unit cooling tower	117,500 gpm	--	Marley 6615-3-09	1976

Proposed Permit

Permitted Equipment					
Equipment ID	Description	Size	Serial Number	Model	Date of Commercial Operation/ Manufacture
Hot Water Heaters and Space Heaters	Process and residential heating units	--	--	--	--
Track Hoppers (8)	Coal Preparation Plant	5000 tph	--	Marathon Steel	1976
Track Feeders (8)	Coal Preparation Plant	900 tph	--	Vibranetics VF-60HD	1976
Conveyor No. 1, 2, 4 through 9	Coal Preparation Plant	5000 tph	--	Marathon Steel	1976
Conveyor 3	Coal Preparation Plant	900 tph	--	Marathon Steel	1976
Conveyor 4a and 4b	Coal Preparation Plant	450 tph	--	Marathon Steel	1976
Shuttle Conveyor Nos. 5-2 and 5-3	Coal Preparation Plant	450 tph	--	Marathon Steel	1976
Conveyor Feeder Nos. 9 through 12	Coal Preparation Plant	450 tph	--	Vibranetics VF-42HD	1976
Conveyor Feeder No. 13	Coal Preparation Plant	900 tph	--	Vibranetics VF-42HD	1976
Crusher	Coal Preparation Plant	1800 tph	12273	Jeffrey Manufacturing Company	1977
Sizing Screens (8)	Coal Preparation Plant	5000 tph	--	Marathon Steel V-16	1977

Proposed Permit

Permitted Equipment					
Rotary Plow Feeder	Coal Preparation Plant	5000 tph	--	Marathon Steel	1976
Equipment ID	Description	Size	Serial Number	Model	Date of Commercial Operation/ Manufacture
Coal Silos (6)	Coal Preparation Plant	240 tph	--	Marathon Steel	1976
Limestone Handling Plant	Storage bin, ball mill, and conveyors	5 tph	--	--	1976
Nonpoint Sources	--	--	--	--	--
Sand Blasting	--	--	--	--	--
Spray Painting	--	--	--	--	--
Mobile Sources	--	--	--	--	--
Demolition and Renovation	--	--	--	--	--
Air Conditioner Maintenance and Service	--	--	--	--	--

Note: *Rated generating capacity of the unit

CONTINUOUS EMISSION MONITORS

Steam Unit	NO _x Monitor	SO ₂ Monitor	CO ₂ Monitor	Opacity Monitor	Flow Monitor
Steam unit 1	TECO Model 42 D (0-500 ppm)	n/a	Fuji Model ZRH-1 (0-20%)	n/a	n/a
Steam unit 2	TECO Model 42 D (0-500 ppm)	TECO Model 43B (0-500 ppm)	Fuji Model ZRH-1 (0-20%)	Lear Siegler Model RM 41 (0-100%)	US Ultraflow Model 100
Steam unit 3	TECO Model 42 D (0-500 ppm)	TECO Model 43B (0-500 ppm)	Fuji Model ZRH-1 (0-20%)	Lear Siegler Model RM 41 (0-100%)	US Ultraflow Model 100

Proposed Permit

AIR POLLUTION CONTROL EQUIPMENT

Equipment ID	Description	Size	Serial Number	Model	Date of Commercial Operation/ Manufacture
Electrostatic Precipitator	Hot Side ESP for Steam Unit 2	1,104,000 acfm at 710 F	75-342	Universal Oil Products	1976/1977
Sulfur Dioxide Absorption System	Wet limestone scrubber for Steam Unit 2	363,000 acfm (during normal operation)	--	Research Cottrell	1976
Electrostatic Precipitator	Hot Side ESP for Steam Unit 3	1,104,000 acfm at 710 F	75-615	Universal Oil Products	1976/1977
Sulfur Dioxide Absorption System	Wet limestone scrubber for Steam Unit 3	363,000 acfm (during normal operation)	--	Research Cottrell	1976
Coal Dust Collection System	Fabric Filter serving Coal Silos 2A, 2B, 2C, 3A, 3B, and 3C, and Conveyors 4A, 4B, 5-2, and 5-3.	28,000 acfm	325	Air-Cure Incorporated/ RF Dust Collector/376 RF10	--
Limestone Silo Bag Filter	Bag Filter on Limestone Silo.	575 acfm	12-52-8117	Flex Kleen/Research Cottrell/58-BV16-11	1977

Proposed Permit

ATTACHMENT "E": INSIGNIFICANT ACTIVITIES

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	345-hp Emergency Caterpillar Diesel Generator, Model SR-4, S/N 90U 1386
2	Analytical Laboratory
3	UA Research Project
4	2,060-gallon Sodium Hypochlorite Storage Tanks (2)
5	3,070-gallon Phosphonate/Tolytriazole Storage Tank
6	1,890-gallon Phosphonate/Tolytriazole Storage Tank
7	5,000-gallon Sulfuric Acid Storage Tanks (2)
8	15,000-gallon Sulfuric Acid Storage Tanks (2)
9	200-gallon Sodium Bromide Storage Tanks (2)
10	300-gallon Phosphate Solution Storage Tanks (2)
11	200-gallon Phosphate Solution Storage Tank
12	160,000-gallon Absorbent Feed Tanks (2)
13	38,100-gallon Limestone Reagent Tank
14	Equipment Wash Facility Propane Tank
15	Firefighter Training Area Propane Tank
16	Natural Gas Piping System
17	10,000-gallon Diesel AST
18	300-gallon 345-hp Generator Diesel AST
19	500-gallon Portable Diesel AST
20	500-gallon Partitioned Gasoline/Diesel Tank
21	500-gallon Gas Turbine Supply Tank

Proposed Permit

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
22	5,000,000-gallon Fuel Oil Tanks (2)
23	1,000,000-gallon Fuel Oil Tanks (2)
24	Lube Oil Storage
25	5,000-gallon Used Oil AST
26	10,000-gallon Gasoline AST
27	Fuel Oil Piping System
28	Used Oil Satellite Collection Areas
29	Used Oil/RCRA/TSCA Waste Accumulation Area
30	5,000-gallon Caustic Tank
31	1,890 Anionic Polymer Storage Tank
32	Tol Oil Pitch & Humectin Storage Tank
33	21,000-gallon BCM tanks (4)
34	6,000-gallon BCM tanks (4)
35	Steam Unit 2 Boiler Blowdown Tank (C-F System)
36	Steam Unit 3 Boiler Blowdown Tank (C-F System)
37	192,000-gallon Condensate Storage Tanks (2)
38	45,000-gallon Condensate Storage Tanks (2)
39	250,000 Treated Water Tank
40	Septic Tank/Leach Field System
41	Office and Administrative Facilities
42	Office and Administrative Activities
43	Groundskeeping Activities
44	Herbicide/Pesticide Use
45	Firefighter Training Area
46	Emergency Flares
47	Kitchen/Break-room Facilities

Proposed Permit

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
48	Cleaning Equipment
49	Unit Maintenance/Repair Activities
50	Lubricant Coating Operations
51	Medical Activities
52	Manually Operated Tool Use
53	Emission Sampling Equipment
54	Unit Testing
55	Process Equipment Seals, Valves and Flanges
56	Brazing, Soldering, or Welding Operations
57	Battery Recharging
58	Aerosol Can Use
59	Plastic Pipe Welding
60	Acetylene, Butane, and Propane Torches
61	Steam Vents, Condenser Vents, and Boiler Blowdown
62	Portable Steam Cleaning Equipment
63	Blast-cleaning Equipment
64	Cooling Tower Blowdown Pond
65	Coal Storage Pile Runoff Retention Basin
66	Pump/Motor Oil Reservoirs
67	Transformer Vents
68	Lubricating System Reservoirs
69	Hydraulic System Reservoirs
70	Adhesive Use
71	Caulking
72	Electric Motors
73	Cathodic Protection Systems

Proposed Permit

S.No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
74	Corona
75	Safety Devices
76	Soil Gas Sampling
77	Filter Draining
78	Heavy Equipment Maintenance Shop
79	Station Transformers
80	Circuit Breakers
81	Generation Unit Gas Vents
82	Flammable Product Storage Cabinets
83	Coal Feeder Cleaning
84	Hot Coal Handling
85	Nonprocess Production of Hot/Chilled Water Using Electricity
86	Test Gases and Bottled Gases
87	Stormwater Systems Including Non-process Sumps and Open or Covered Drainage Troughs from Process Areas for Rainwater Handling.

Proposed Permit

ATTACHMENT "F": PHASE II ACID RAIN PROVISIONS

Air Quality Control Permit No. 1000109

For

Arizona Electric Power Cooperative, Inc. - Apache Generating Station

I. Statement of Basis

Statutory and Regulatory Authorities: In accordance with Arizona Revised Statutes, Title 49, Chapter 3, Article 2, Section 426.N, and Titles IV and V of the Clean Air Act, the Arizona Department of Environmental Quality issues this Phase II Acid Rain Permit pursuant to Arizona Administrative Code, Title 18, Chapter 2, Article 3, Section 333 (A.A.C. R18-2-333), "Acid Rain".

II. SO₂ Allowance[†] Allocations and NO_x Requirements for Each Affected Unit

		1998	1999	2000	2001	2002	2003	2004
Unit 1	SO ₂ allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	329*	329*	329*	329*	329*
	NO _x limit	This unit is not subject to a NO _x limit under 40 CFR Part 76.						

		1998	1999	2000	2001	2002	2003	2004
Unit 2	SO ₂ allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	1597*	1597*	1597*	1597*	1597*
	NO _x limit	Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NO _x early election compliance plan for Unit 2. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, the unit's annual average NO _x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(1) of 0.45 lb/MMBtu for tangentially fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(1), of 0.40 lb/MMBtu until calendar year 2008.						

Proposed Permit

		1998	1999	2000	2001	2002	2003	2004
Unit 3	SO ₂ allowances under Tables 2, 3, or 4 of 40 CFR part 73	NA	NA	2987*	2987*	2987*	2987*	2987*
	NO _x limit	Pursuant to 40 CFR 76.8(d)(2), Arizona Department of Environmental Quality approves a NO _x early election compliance plan for Unit 3. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, the unit's annual average NO _x emission rate for each year, determined in accordance with 40 CFR Part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(1) of 0.45 lb/MMBtu for tangentially fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(1), of 0.40 lb/MMBtu until calendar year 2008.						

† As defined under 40 CFR §72.2, "Allowance" means an authorization by the Administrator under the Acid Rain Program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

* The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40 CFR part 73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

III. Comments, Notes and Justifications

AEPCO has early-elected for NO_x requirements on Units 2 and 3.

IV. Permit Application

The Permittee, and any other owners or operators of the units at this facility, shall comply with the requirements contained in the attached acid rain permit application (OMB No. 2060-0258) signed by the Designated Representative Larry D. Huff on 12/13/95 and revised on 6/6/96 (OMB No. 2060-0221) by new Designated Representative Charles E. Davis Jr. and Alternate Designated Representative James M. Andrew on June 6, 1996.